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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,561	10/03/2003	Bernd Heigl	DT-6636	2539

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EXAMINER	
TIBBITS, PIA FLORENCE	

ART UNIT	PAPER NUMBER
2838	

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/678,561	HEIGL, BERND	
	Examiner	Art Unit	
	Pia F. Tibbits	2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 May 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,11 and 12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,11 and 12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 May 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5/19/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office action is in answer to the amendment filed 5/19/2006. Claims 1-8 and 11-12 are pending, of which claims 1, 3-8 are amended, and claims 11, 12 are added. Claims 9, 10 are canceled.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the rotor must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 2, 11, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Philipp** [5136220].

Philipp discloses in figures 1-4 a battery-operated electric hand tool machine comprising a three-phase [see column 8, line 13] electric motor 15 in a machine housing 12, an exchangeable battery pack 22 [see column 1, line 14], and a control module 10 with a power electronics 60 for motor control of the electric motor 15 and protection of the battery pack 22 [see column 1, lines 31-33] and connected to the electric motor 15 via at least three interface contacts D1-D3 [see fig.1; column 3, lines 18-26]. Philipp does not disclose wherein at least the power electronics 60 of the control module 10 is arranged entirely in the exchangeable battery pack 22.

With regard to the particular location of the power electronics 60, i.e., arranged entirely in the exchangeable battery pack 22, absent any criticality, is only considered to be an obvious modification as it has been held by the courts that there would be no invention in shifting the location of a structure of a device to another location if the operation of the device would not thereby be modified. ***In re Japikse***, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) ***MPEP 2144.04.***

As to claim 2, 11, see remarks and reference above.

As to claim 12, the battery pack has eight interface contacts was interpreted in light of the specification describing at paragraph 0017 "whereby three are connected via the phase current sensors to the power electronics and another five are connected to the integrated control module". Philipp discloses the electric motor 15 connecting via at least three interface contacts D1-D3 to the battery pack 22. As to the battery pack 22 comprising 5 additional interface contacts, absent any criticality, is only considered to be the use of "optimum" or "preferred" material that a person having ordinary skill in the art at the time the invention was made using routine experimentation would have found obvious to provide for the number of interface contacts between the battery pack and the control module 10 of the DC motor of an electric tool disclosed by Philipp in order to provide a compact power supply since the courts held to be a matter of obvious design choice and within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use of the invention. See ***In re***

Leshin, 125 USPQ 416. ***In re Aller***, 105 USPQ 233 (CCPA 1955), ***In re Boesch***, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

4. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Broghammer et al.** [20040112616] in view of **Hudson et al.** [6173350] and **Smart Battery Data Specification** @ http://www.sbs-forum.org/specs/errata_sbdat110a.pdf.

Broghammer discloses in figures 1-6 a battery-operated electric hand tool machine comprising an electric motor 23 in a machine housing 22, an exchangeable battery pack [see page 2, paragraph 0025], and a control module 4 with a power electronics 5 for motor control of the electric motor 23 and wherein at least the power electronics 5 of the control module 4 is arranged entirely in the exchangeable battery pack [see page 1, paragraph 0012].

Broghammer does not disclose protection of the battery pack, and a three phase electric motor connected via at least three interface contacts.

As to the use of a three phase electric motor, absent any criticality, is only considered to be the use of "optimum" or "preferred" material that a person having ordinary skill in the art at the time the invention was made using routine experimentation would have found obvious to provide for the DC motor of an electric tool disclosed by Broghammer in order to provide a compact power supply since the courts held to be a matter of obvious design choice and within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use of the invention. See ***In re Leshin***, 125 USPQ 416. ***In re Aller***, 105 USPQ 233 (CCPA 1955), ***In re Boesch***, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

With regard to the limitation of having at least three interface contacts: it is an inherent function of three phase electric motor to have power provided to the at least three interface contacts, and MPEP 2100 states that the disclosure of a limitation may be expressed, implicit or **inherent.**

Hudson discloses a system that provides control bus (SMBus) management and interface [see fig.2] for a smart battery system designed for use in conjunction with an intelligent host device such as a power tool [see column 4, lines 19-24]. Therefore, it would have been obvious to a person having

ordinary skill in the art at the time the invention was made to modify Broghammer's apparatus and include a smart battery 30, as disclosed by Hudson, in order to provide control bus (SMBus) management and interface for a battery system designed for use in conjunction with an intelligent host device such as a power tool.

Smart Battery Data Specification describes a **Smart Battery** equipped with specialized hardware that provides present state, calculated and predicted information to its SMBus Host under software control including Smart Battery critical messages/battery protection.

As to claims 2-8, see remarks and references above.

Response to Arguments

5. Applicant's arguments with respect to the claims have been considered but are moot in view of the new grounds of rejection. Applicant amended the claim to include a three-phase electric motor, which is new issue.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related apparatus.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Pia Tibbits whose telephone number is 571-272-2086. If unavailable, contact the Supervisory Patent Examiner Karl Easthom whose telephone number is 571-272-1989. The Technology Center Fax number is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PFT

August 13, 2006

Pia Tibbits

Primary Patent Examiner